

Amendments to the Claims

The listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of claims

Claim 1: (currently amended) A system for creating and transmitting a broadcast signal ~~containing~~ from a plurality of bytes through a communication medium to a receiving device, said system comprising:

means for parsing said plurality of bytes into at least one frame, ~~said at least one frame containing a subset of said plurality of bytes,~~ said at least one frame having contextually relevant content;

~~computing means for determining over said subset a checksum value uniquely identifying said subset;~~

means for providing an integrity element for said at least one frame subset;

~~means for embedding said checksum value into said integrity element;~~

means for placing said integrity element around said at least one frame such that said integrity element encapsulates said at least one frame and can be used to determine if said at least one frame subset arrived at said receiving device substantially intact, said at least one frame and said integrity element together forming a said broadcast signal; and

means for transmitting said broadcast signal using a unidirectional protocol to said receiving device, said receiving device having a current context; and

means for comparing said current context to said contextually relevant content;

~~wherein said broadcast signal is transmitted through said communication medium to said receiving device~~ receiving device is capable of accepting or ignoring said at least one frame based on said means for comparing.

Claim 2: (currently amended) The system of claim 1 wherein said integrity element ~~further~~ comprises:

a checksum;

a frame size value for said at least one frame, said frame size value being used in computing said checksum value;

an operator identifying a mathematical operator used to compute said checksum value; and

a seed value, said seed value being used in conjunction with said operator and said subset to determine said checksum value.

Claim 3: (currently amended) The system of claim 1 wherein said ~~broadcast~~ signal is ~~comprised of an~~ comprises:

at least one eXtensible markup language (XML) element.

Claim 4: (currently amended) The system of claim ~~3~~ 1 wherein said ~~broadcast~~ signal is transmitted as a diffuse infrared signal.

Claim 5: (currently amended) A system for receiving and utilizing a data signal having a plurality of bytes comprising:

means for detecting a frame and an integrity element from said plurality of bytes, said frame containing contextually relevant information, said integrity element containing at least one parsable data structure;

means for separating said frame and said integrity element to obtain a separated integrity element;

means for determining contents of said separated integrity element; ~~and~~

means for utilizing said contents for testing the validity of said frame; ~~and~~

means for ignoring said frame based on said contextually relevant information.

Claim 6: (currently amended) The system of claim 5 wherein said integrity element ~~contains~~ comprises:

a checksum value computed over ~~said plurality of bytes comprising~~ said frame;

a seed value associated with said checksum value;

an operator associated with said checksum value; and

a frame size associated with said frame;
wherein said checksum value is based on said seed value, said operator, said
frame size, and said frame.

Claim 7: (currently amended) The system of claim 6 wherein said means for testing
validity comprises:

means for computing a received checksum value based on said seed value, said
operator, said frame size, and said frame; and
~~further comprising~~ means for validating said frame if said checksum value in said
~~integrity element matches a second~~ said received checksum value ~~computed over said~~
~~frame by said apparatus.~~

Claim 8: (currently amended) The system of claim 6 wherein said means for testing
validity comprises:

means for computing a received checksum value based on said seed value, said
operator, said frame size, and said frame; and
~~further comprising~~ means for invalidating said frame if said checksum value in said
~~integrity element does not match a second~~ said received checksum value ~~computed~~
~~over said frame by said apparatus.~~

Claim 9: (currently amended) The system of claim 6 wherein said ~~integrity element~~
~~further includes:~~

~~a size for said frame, said size being used in the determination of said first~~
~~checksum value;~~
~~an operator identifying~~ identifies a mathematical operator ~~used in computing said~~
~~first checksum value; and~~
~~a seed, said seed being used in conjunction with said operator and said frame to~~
~~determine said first checksum value.~~

Claim 10: (previously presented) The system of claim 5 wherein said data signal is a diffuse infrared signal.

Claim 11: (currently amended) The system of claim 40 5 wherein said data signal is created by modulating an electric light.

Claim 12: (currently amended) A method for creating and transmitting a data signal to a handheld device ~~of utilizing executable code in a source device, said method~~ comprising the steps of:

parsing a said plurality of bytes into a at least one frame, the at least one frame containing contextually relevant content;

determining a checksum value over ~~said~~ the at least one frame;

providing an integrity element;

embedding ~~said~~ the checksum value into ~~said~~ the integrity element;

encapsulating ~~said~~ the at least one frame within ~~said~~ the integrity element containing ~~said~~ the checksum value to produce a broadcast data signal; and

~~making said~~ providing the broadcast data signal available to a transmitter for transmission to a handheld device through a communication medium, the handheld device having a current context,

comparing the current context with the contextually relevant content; and

ignoring the at least one frame based on said step of comparing.

Claim 13: (currently amended) The method of claim 12 further comprising the step of: wherein ~~said~~ forming the frame from ~~is comprised of an~~ at least one eXtensible markup language (XML) element.

Claim 14: (currently amended) The method of claim 12 further comprising the step of: wherein ~~said transmitter is~~ providing the signal to a diffuse infrared transmitter for transmission to the handheld device.

Claim 15: (currently amended) The method of claim 12 further comprising the step of:
wherein said forming the integrity element further includes: from:

A a frame size for said the at least one frame, said the frame size having been used in the determination of said the checksum value;

an operator identifying a mathematical operator used in computing said the checksum value; and

a seed value having been used in conjunction with said the operator and said plurality of bytes making up said the frame to determine said the checksum value.

Claim 16: (currently amended) A method for validating an incoming data stream of
utilizing executable code in a receiving device, said method comprising the steps of:

receiving an the incoming data stream ~~comprised of~~ having a plurality of bytes organized into at least one frame, the incoming data stream being associated with
having an integrity element, the integrity element including a seed value, an operator, a frame size, and a first checksum value associated therewith;

~~separating said integrity element from said at least one frame to produce a separated integrity element;~~

~~reading a first checksum value from said separated integrity element;~~

computing a second checksum value from said the plurality of bytes within said the at least one frame, the second checksum value being based on the seed value, the operator, the frame size, and the at least one frame;

~~comparing said first checksum value to said second checksum value to determine if there is a match therebetween; and~~

passing said the at least one frame to a receiving module if said the first checksum value matches said the second checksum value.

Claim 17: (currently amended) The method of claim 16 further comprising the step of:
wherein said forming the at least one frame from ~~is comprised of an~~ at least one
eXtensible markup language (XML) element.

Claim 18: (currently amended) The method of claim 16 further including the step of:
~~after said comparing step, discarding said the at least one frame if said the first~~
checksum value does not match ~~said the~~ second checksum value.

Claim 19: (currently amended) The method of claim 16 ~~wherein said integrity element~~
~~further includes:~~ further comprising the step of:

identifying a mathematical operator as the operator.
~~a size for said at least one frame, said size being used in the determination of~~
~~said first checksum value;~~
~~an operator identifying a mathematical operator used in computing said first~~
~~checksum value; and~~
~~a seed, said seed being used in conjunction with said operator and said plurality~~
~~of bytes making up said at least one frame to determine said first checksum value.~~

Claim 20: (currently amended) A method for creating a data signal at a source device
having a transmitter associated therewith, said method comprising the steps of:

~~parsing said data signal into a plurality of bytes;~~
receiving service data from at least one service provider;
filtering the service data to create contextually relevant information;
formatting the contextually relevant information according to a pre-selected data
structure language;
~~grouping a subset of said a plurality of bytes~~ the formatted contextually relevant
information into at least one frame;
~~determining over said subset a checksum value~~ based on the at least one frame,
the checksum value uniquely identifying ~~said subset~~ the at least one frame;
providing an integrity element for said subset the at least one frame;
embedding said the checksum value into said the integrity element;
encapsulating said the frame with said the integrity element including said the
checksum value to form a the broadcast data signal; and

~~making said~~ providing the broadcast data signal available to said the transmitter for transmission to a receiving device through a communication medium; and
parsing the at least one frame using the pre-selected data structure language to
retrieve the contextually relevant information.

Claim 21: (currently amended) The method of claim 20 ~~wherein said integrity element further comprises:~~ further comprising the step of:

forming the integrity element from parameters including:

a frame size for said at least one frame, said the frame size being used in the determination of said the checksum value;

an operator identifying a mathematical operator used to compute said the checksum value; and

a seed, said the seed being used in conjunction with said the operator and said the subset making up said frame to determine said the checksum value.

Claim 22: (currently amended) The method of claim 20 further comprising the step of: wherein said forming the data signal from ~~comprises an~~ at least one eXtensible markup language (XML) element.

Claim 23: (currently amended) The method of claim 24 20 further comprising the step of: wherein said ~~transmitter is~~ making the data signal available to a diffuse infrared transmitter for transmitting a diffuse infrared signal.

Claim 24: (currently amended) The method of claim 23 20 further comprising the step of: wherein said ~~diffuse infrared transmitter is~~ creating the data signal by modulating an ~~a modulated~~ electric light.

Claim 25: (currently amended) A method for receiving and utilizing a data signal having a plurality of bytes, said method comprising the steps of:

detecting an integrity element encapsulating ~~said the~~ plurality of bytes, ~~said the~~ plurality of bytes having been organized into a frame, the frame containing contextually relevant information; and

determining validity of the frame based on the integrity element and the frame, the integrity element including a seed value, an operator, a first checksum value, and a frame size.

~~separating said frame from said integrity element to obtain a separated integrity element;~~

~~extracting the contents of said separated integrity element; and~~

~~utilizing said contents for testing the validity of said frame.~~

Claim 26: (currently amended) The method of claim 25 wherein said step of determining the validity further comprising comprises the step steps of:

computing a second checksum value based on the seed value, the operator, the frame size, and the frame; and

~~validating said the frame if said the first checksum value in said separated integrity element matches a second checksum value computed over said plurality of bytes making up said frame during said utilizing step.~~

Claim 27: (currently amended) The method of claim 25 wherein said step of determining the validity further comprising comprises the step steps of:

computing a second checksum value based on the seed value, the operator, the frame size, and the frame; and

~~invalidating the frame if the first checksum value in said separated integrity element does not match a second checksum value computed over said plurality of bytes making up said frame during said utilizing step.~~

Claim 28: (currently amended) A computer-readable data signal for modifying the operation of a receiving device, said data signal comprising:

a at least one frame ~~containing at least a subset of a plurality of bytes, capable of the contents of said frame for~~ modifying said the operation of said the receiving device when the receiving device receives and processes said at least one frame upon receipt and processing by said receiving device; and

an integrity element associated with said at least one frame, said integrity element containing a first checksum value determined from said at least one frame at ~~least a subset of said plurality of bytes,~~ said first checksum for validating the contents of said at least one frame, said validating being successful if a second checksum value computed over said at least one frame at said receiving device matches said first checksum value.

Claim 29: (previously presented) A computer-readable data signal for modifying the operation of a receiving device, said data signal comprising:

a frame containing at least a subset of a plurality of bytes, the contents of said frame for modifying said operation of said receiving device upon receipt and processing by said receiving device; and

an integrity element containing a first checksum value determined from said at least a subset of said plurality of bytes, said first checksum for validating the contents of said frame, said validating being successful if a second checksum value computed over said frame at said receiving device matches said first checksum value,

wherein said integrity element is an eXtensible markup language (XML) element encapsulating said frame.

Claim 30: (currently amended) The computer-readable data signal of claim 28 wherein said integrity element further comprises:

a frame size value, said frame size value corresponding to the number of bytes in said at least one frame that were used in computing said first checksum value;

a seed value, said seed value being used in determining said first checksum value; and

an operator used in conjunction with said seed value to compute said first checksum value.

Claim 31: (currently amended) The computer-readable data signal of claim 28 wherein said contents of said at least one frame include an at least one eXtensible markup language (XML) element.

Claim 32: (previously presented) The computer-readable data signal of claim 29 wherein said integrity element further comprises:

a frame size value, said frame size value corresponding to the number of bytes in said frame that were used in computing said first checksum value;

a seed value, said seed value being used in determining said first checksum value; and

an operator used in conjunction with said seed value to compute said first checksum value.

Claim 33: (previously presented) The computer-readable data signal of claim 29 wherein said contents of said frame include an eXtensible markup language (XML) element.

Claim 34: (new) The computer-readable data signal of claim 29 wherein said contents of said frame include at least one parsable data structure.

Claim 35: (new) A computer-readable data signal for modifying the operation of a receiving device, said data signal comprising:

a frame containing at least a subset of a plurality of bytes, the contents of said frame for modifying said operation of said receiving device upon receipt and processing by said receiving device; and

an integrity element containing a first checksum value determined from said at least a subset of said plurality of bytes, said first checksum for validating the contents of

said frame, said validating being successful if a second checksum value computed over said frame at said receiving device matches said first checksum value,

wherein said integrity element includes at least one parsable data structure encapsulating said frame.

Claim 36: (new) The computer-readable data signal of claim 35 wherein said integrity element further comprises:

a frame size value, said frame size value corresponding to the number of bytes in said frame that were used in computing said first checksum value;

a seed value, said seed value being used in determining said first checksum value; and

an operator used in conjunction with said seed value to compute said first checksum value.

Claim 37: (new) The computer-readable data signal of claim 35 wherein said contents of said frame include at least one parsable data structure.